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ABSTRACT

Supported by a grant under Title III of the Elementary and Secondary Education Act, a field project was developed to compare achievement at three levels of instruction (grades 0-3, 4-6, 7-8) in an adult learning laboratory and a sample of traditional adult basic education (ABE) classes during 1968-69. Classes, stressing prevocational readiness and personal growth, had similar class hours, numbers of students, and a representative sample of out of school youth and adults in the Cincinnati Public Schools ABE program. The classes, which focused on learning skills rather than content, offered 100 hours of instruction in language arts, arithmetic, and general education based largely on printed materials. The learning laboratory provided for independent study and individualized instruction through a variety of programed and self-instructional materials as well as audiovisual aids. Much study was accomplished at home in leisure hours. Two major findings were that average gains in test scores showed educational needs being served by both approaches; but that Level 3 gains, being somewhat lower than anticipated, indicate a need for more of both traditional and programed materials. (The document includes 15 tables, cooperating agencies and projects, tests, evaluation procedures, adult centers, methods and materials, equipment, and a list of publishers.) (LY)

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Adult Learning Laboratory

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Adult Basic Education

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ADULT LEARNING LABORATORIES

IN

ADULT BASIC EDUCATION

FOR USE WITH

OUT OF SCHOOL YOUTH AND ADULTS

IN CONTINUING EDUCATION CLASSES

DEVELOPED AND COMPILED

BY

DIVISION OF CONTINUING EDUCATION
CINCINNATI PUBLIC SCHOOLS

1970

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TABLE OF CONTENTS

page

INTRODUCTION 1

SECTION I. DESCRIPTION OF ADULT BASIC EDUCATION CLASSES 3

Description of Traditional Adult Basic Education
Description of the Adult Learning Laboratory

SECTION II. THE ROLE OF ADULT BASIC EDUCATION IN LOCAL AND FEDERAL PROGRAMS IN COOPERATION WITH COMMUNITY AGENCIES 8

Neighborhood Youth Corps
Work Incentive Program
The Urban Conservation Project
Opportunities Industrialization Center
Hamilton County Welfare

SECTION III. DESCRIPTION OF EVALUATIVE INSTRUMENTS AND PROCEDURES 16

Description of Evaluative Instruments (Testing Instruments)
Description of Evaluative Procedures (Testing Procedures)

SECTION IV. PROFILE OF STUDENTS INVOLVED IN STUDY 24

Traditional and Adult Learning Laboratory

SECTION V. COMPILATION OF TEST DATA 27

The Testing
Median Gains of Students In The Traditional Class
Median Gains of Students In The Adult Learning Laboratory
Average Gains According To Grade Level And Test Area
Median Gains According To Type Of Class

page

SECTION VI. SPECIAL REPORT SECTION - COMPILATION OF TEST DATA. . 37

Adult Learning Laboratories Using Educational Developmental Laboratories Soft and Hardware Equipment
Reading Comprehension
Vocabulary
Observations From The Test Results

SECTION VII. CRITERIA FOR EVALUATING TEACHING MATERIALS FOR ADULT BASIC EDUCATION 47

Criteria for Evaluation of Individualized and Programmed Materials

SECTION VIII. DESCRIPTION OF TEACHING MATERIALS USED IN ADULT BASIC EDUCATION 52

Reading for Understanding (Science Research Associates)
The Sullivan Reading Series (A Behavioral Research Laboratories Program)
The Science Resource Associates Reading Laboratory IIIa
Programmed Mathematics for Adults (A Sullivan Associates Program)
Educational Developmental Laboratories, Inc.

APPENDIX 72

I. Stowe Adult Center Extension Operations 72

II. Methods in the Traditional Adult Basic Education Classes . . . 75

III. Materials in Traditional Adult Basic Education Classes 80

IV. Methods In The Adult Learning Laboratory Class 84

V. Programmed, Non-Programmed, and Individualized Materials In The Adult Learning Laboratories 87

VI. Hardware For Adult Learning Laboratory 91

VII. Publishers And Addresses 95

INTRODUCTION

This study was developed to provide a means for comparing achievement made at three levels of instruction in both the Adult Learning Laboratory and in the Traditional Adult Basic Education class for the year 1968-1969. Analysis of the results will provide a means for determining strengths in the total program, so that they may be reinforced and for revealing weaknesses, so that they may be eliminated.

The study was a field project rather than research. The classes chosen to be included in the study were not "randomized" from the total Adult Basic Education Program, but rather were picked so as to have similar class hours, numbers of students, and to represent the full range of out of school youth and adults reached through the Cincinnati Public Schools Adult Basic Education Program. There was no attempt to control the results obtained from data; rather an attempt was made to explain to the reader those factors which could affect the data so that they might be considered in evaluating the results.

In addition, an overview of the Adult Basic Education Program in Cincinnati was presented to allow a comprehensive picture of the variety of class structures and situations. It was also considered necessary to give a well-rounded picture of the methods and materials which were predominantly used in those classrooms involved in this study. In this way, the reader can both benefit from a reasonable knowledge of the inter-workings of the classroom in evaluating the results obtained from the study, and obtain important information about methods and materials.

Under the general direction of Mr. Robert Finch, Director of Continuing Education, this study of adult basic education classes was developed by a committee of teachers, all of whom teach adult basic education in the Cincinnati Public Schools. Mr. James V. Gillen, Associate Supervisor, and Mrs. Margaret Ruth Rice, Supervising Teacher, served as co-chairmen. Mrs. Ruth Schneider served on the committee as editor. Other members of the committee were Mrs. Joan Plock, Mrs. Roberta Stewart, and Mrs. Catherine Wolters.

The Cincinnati Public Schools acknowledges, with appreciation, the encouragement to conduct this evaluative study on the Adult Learning Laboratories and Traditional Adult Basic Education Classes, which came from Mr. James Miller, Section Chief, Special Programs, and Mr. George Travis, Educational Consultant.

John W. Shreve
Associate Superintendent

Approved:

Paul A. Miller
Superintendent of Schools
March, 1970

DESCRIPTION OF ADULT BASIC EDUCATION CLASSES

This study was undertaken with classes operated by the Cincinnati Public Schools, Division of Continuing Education, under Public Law 89-750, 1966. Adult Basic Education classes of both the traditional group study class arrangements and the Adult Learning Laboratory type were included in the project of research and testing.

DESCRIPTION OF TRADITIONAL ADULT BASIC EDUCATION CLASSES

With the acceleration of technological advancement and the growing complexity of daily living, the uneducated adult finds himself increasingly alienated from the mainstream of American life. He lacks basic skills needed for entry to and survival in the world of work; he lacks basic skills necessary for decision making in the marketplace, in the voting booth and in his home. In the Adult Basic Education traditional classroom, the undereducated finds both climate and means for his acquisition of the learning tools of reading, writing and arithmetic, and of an improved sense of personal dignity and worth.

While immediate reasons for enrollment in Adult Basic Education vary between individuals, the general underlying objectives of the Program are:

Pre-Vocational Readiness so that the learner may:

1. gain 8th grade equivalency
2. enter high school credit classes
3. qualify for a job training program
4. retain and advance in his present job
5. find a new job

Personal Growth so that the learner may:

1. accept the responsibilities of an informed citizen
2. make wise decisions as a consumer
3. use his leisure time well
4. transmit to his children the values of education

5. meet day-to-day problems more efficiently

6. gain self-respect which comes from fuller participation in American life

The instructional program encompasses three curriculum divisions as well as three teaching levels. The three broad curriculum divisions are Language Arts including reading and all other skills of oral and written English; Arithmetic including computational skills, consumer education and budgeting, and other practical problem solving; and General Knowledge, emphasizing job seeking and holding skills, as well as health and safety, American history and civics, science and current events. The teaching levels are Level I, grades 0-3; Level II, grades 4-6; and Level III, grades 7-8. Classes are established at each of the levels and are self-contained.

These designations of level facilitate organization and instruction but do not necessarily categorize students. An individual, for example, may be reading at Level I while achieving Arithmetic skills at Level II. Because emphasis is on functional and intellectual growth of the learner at his own pace, the trend is away from insistence upon lockstep determination of grade or level. Cognizant of the recent shift of purpose in education from transmission of knowledge to development of the capacity to learn, the traditional Adult Basic Education class is focusing less on subject mastery and more upon learning skills.

DESCRIPTION OF THE ADULT LEARNING LABORATORY

The Adult Learning Laboratory, as it functions in the Adult Basic Education Program in the Cincinnati Public Schools has as its goals the same general objectives as those of the traditional class. The methods used to persue these objectives differ. The learning laboratory provides for independent study and individualized instruction for the adult learner by using a variety of programmed and self-instructional materials as well as audio-visual aids.

Language arts and arithmetic compose the major areas of the curriculum, while science and social studies become important to students interested in preparing for eighth grade equivalency.

Class time is flexible and this appeals to many youth and adults who would be unable to attend a regularly scheduled class because of conflict of time and responsibilities.

In general, instruction is exemplified by:

. . . independent study by the student

. . . individualized and programmed materials

. . . individual scheduling

. . . personal goal planning

. . . personal rate of progress

The instructor is able to work with twenty to twenty-five students comfortably at one time in this situation. Up to one hundred and twenty-five stu-

dents may be enrolled for instruction concurrently in a laboratory functioning for six to seven hours daily because daily attendance is not necessary. Much of the adult learner's study is accomplished at home during leisure hours.

THE ROLE OF ADULT BASIC EDUCATION IN LOCAL AND FEDERAL PROGRAMS IN COOPERATION WITH COMMUNITY AGENCIES

Stowe Adult Center is allied with a number of community agencies in the organization and operation of adult basic education classes. Of those at Stowe, several traditional classes and a laboratory were involved in this study. In addition, several classes and laboratories from extensions participated. These latter were chosen because they are representative of all adult basic education classes connected with Stowe Adult Center and because they were more accesible than others for the collection of test data. Following are descriptions of the general functions of these agencies and their ties with Stowe Adult Center:

Neighborhood Youth Corps

Work Incentive Project

Urban Conservation Project

Opportunities Industrialization Center

Hamilton County Welfare

NEIGHBORHOOD YOUTH CORPS

In the Cincinnati Area, the Neighborhood Youth Corps has established a varied program designed to train young people between the ages of sixteen and twenty-one for vocations which are important to the community as well as the students. Business, industry, and municipal agencies are cooperating in this program to help train these youth by providing on-the-job training. The Cincinnati Public Schools' Continuing Education Division adds its support to the program by providing classes for remedial education for the Neighborhood Youth Corps youth through its Adult Basic Education Program.

The need for remedial education was recognized three years ago in the Neighborhood Youth Corps Program and a single adult basic education class was put into operation as a pilot project. Favorable results, in this class, brought about the incorporation of educational components in other areas of the program.

The youth apply for training at the Neighborhood Youth Corps' Intake Office; if they meet required standards, they are tested, counseled, and placed in that program which best fits their ability, aptitude, and interest.

Following are the six Neighborhood Youth Corps classes where adult basic education is offered:

Saint Jospeh - Clerk typist co-op program -- Learning Laboratory and traditional classes.

Hospital personnel program at Rollman Psychiatric Hospital, Longview State Hospital, and General Hospital -- all Learning Laboratory Programs.

Cincinnati Highway Maintenance -- Traditional Classes.

Experimental Education -- Lincoln Center Program Learning.

The Adult Basic Education Curriculum in all these situations strives to elevate the educational level of these youth to eighth grade in any area of deficiency. It also attempts to provide the young people with an understanding of how to better function in today's complicated society. Traditional or Adult Learning Laboratory Programs are utilized depending on the needs of each class or program.

WORK INCENTIVE PROGRAM

The Work Incentive Program, through counseling, vocational training, and basic education prepares people who are presently unemployable for employment. This program is authorized under the Social Security Act and works through the Ohio State Employment Service with referrals from the Hamilton County Welfare Department.

The people in the adult basic education classes attend six hours a day, attending a traditional class for one-half day and a learning laboratory for the other half day. For the most part, they use individualized programs of study, concentrating on arithmetic and reading, but also studying other subjects where they need additional help. Some of these people are learning to read and write for the first time. Others are trying to improve their reading and arithmetic skills so they can obtain jobs. Still others are working towards taking the eighth-grade equivalency test so they can move on to training in vocational trades. The Work Incentive Program is planning an adult learning laboratory for its students where they will learn to use programmed materials both hard and soft.

Besides adult basic education classes, the Work Incentive counselors place people referred to them in work sites (non-competive jobs for various agencies), on-the-job training, special work projects, special training projects, and in specific trades.

THE URBAN CONSERVATION PROJECT

The Urban Conservation Project's purpose is to train men, ages 18 to 25, for permanent employment in the building trades. It makes training possible in plastering, electrical wiring, carpentry, painting, and cement masonry. In the near future, plumbing and roofing will be added to the training program. Well-experienced union journeymen, foremen, and trainers supervise in the above areas.

Most trainees who enroll in the Urban Conservation Project are junior and senior high school drop-outs who lack the basic skills necessary to acquire employment. However, these young men realize their shortcomings and are eager to do something about them.

The Urban Conservation Project, realizing that more remedial education was needed, asked the Division of Continuing Education to send a qualified teacher, who would work to help the trainees improve their basic education.

The Adult Basic Education teacher started in a small, dingy room of a garage building, with limited equipment and materials. After a short time, the situation improved. A large area for education classes was partitioned and paneled, carrels were installed, the necessary electric lights and plugs were added. All of this construction, including building of the carrels, was done by the trainees under the supervision of their trainers. This task was quite a challenge for the trainees; Stowe Adult Center, furnished the programmed materials, and audio and visual aids. These combined efforts brought favorable reactions from the

trainees. Although each day brought a new challenge to learning the 3 R's, the trainees found the materials were stimulating, were on the appropriate levels, and were designed to help them experience academic success.

Emphasis of the Adult Basic Education program in the Urban Conservation Project is an acceptance of the men at first meeting with no looking back on past mistakes. Tasks are assigned which will lead to success and will raise their levels of self-respect. These men need to know you are "in their corner" and they welcome individual help; they also resent anything that resembles a school classroom setting, and the teacher must be ever mindful of this when planning his daily program.

The testing of each trainee on the day he enters the Adult Basic Education program makes it possible to choose materials needed to strengthen his areas of weakness without exposing him to any embarrassment with his friends.

The orientation period at Urban Conservation Project lasts four weeks. If a trainee has been successful in completing the orientation requirements, he will be assigned to a crew in the building trade of his choice.

This program was discontinued as of November 28, 1969.

OPPORTUNITIES INDUSTRIALIZATION CENTER

Another of the cooperating agencies is the Opportunities Industrialization Center. This organization's aim is to assist the unemployed and underemployed through job training. An important provision of their program is the opportunity afforded the trainees to receive Adult Basic Education through cooperation with the Cincinnati Public Schools.

Diagnostic testing is administered during the trainees' orientation period. Those below ninth grade in reading or arithmetic are assigned to one or two hours per day of individualized reading instruction. Adult basic education teachers provide this instruction utilizing a complete Educational Development Laboratory, Reading 300. The equipment is provided by Opportunities Industrialization Center for the use of the adult basic education teachers who are assigned by the Cincinnati Public Schools.

The teachers and Opportunities Industrialization Center guidance counselor determine when an individual's academic achievement level is sufficiently upgraded to warrant his entry to the vocational skills training phase. Some enter the skills areas and leave the Educational Developmental Laboratory entirely. Others are trained in vocational skills half of each day; while they continue in basic education the other half of the day. For this latter group, vocational skills are not acquired as quickly as for the former.

HAMILTON COUNTY WELFARE

Hamilton County Welfare is an important community agency with which the Cincinnati Public Schools cooperate. At the beginning of each school year, welfare social workers determine who among their clients would benefit from the educational opportunity of adult basic education. Letters are then sent from Hamilton County Welfare to the selected clients suggesting that they enroll. To facilitate their enrollment, these prospective students are furnished bus tokens for their first trip to Stowe; so that further transportation costs are not a deterrant to class attendance, those students assisted financially by Hamilton County Welfare are supplied daily with bus fare by that agency. Periodically, the case worker requests from the teacher a report of the learner's adjustment and progress.

Jointly, Hamilton County Welfare and the Cincinnati Public Schools undertake the training of Nurse Aides (reimbursement for Nurse Aide classes is received by the school system through the Vocational Education Act of 1968). Generally, three such classes of twelve weeks each are conducted during the school year. Half the school day is given to the teaching, by a registered nurse, of the required nurse aide skills, and the other half to adult basic education which is job-related. Qualified women, currently on Hamilton County Welfare, are chosen for this class. Having successfully completed this course, these women are able to provide for themselves financially while supplying the community with important services.

DESCRIPTION OF EVALUATIVE INSTRUMENTS AND PROCEDURES

During the study two standardized adult achievement tests were used to measure students' progress in the basic skills of reading and arithmetic. In the traditional classes the test battery was administered to total classes while in the Adult Learning Laboratory the tests were administered on an individualized basis due to flexible scheduling of students. A careful time lapse control was maintained in both the traditional classes and the Adult Learning Laboratories.

DESCRIPTION OF EVALUATIVE INSTRUMENTS

TESTS USED:

1. The Student Survey Test

   Follett Publishing Company
   P. O. Box 5705
   Chicago, Illinois 60680

The Student Survey is a multi-level, adult oriented test ranging from first grade equivalency to 7.9 grade equivalency. The four parts of the test include:

1. Reading Comprehension
2. Word Recognition
3. Arithmetic Computation
4. Arithmetic Word Problems

Answer sheets are used with a non-consumable test booklet, making the cost about ten cents per student, after purchase of the test itself. It is a power test. No time limits are set. However, since the student is penalized for wrong answers, he should be encouraged to stop at a point where the test materials become too difficult.

Considerable time should be spent to explain fully the use of the answer sheet, and the examiner should be constantly watchful that the student is recording answers correctly.

Transparent templates make grading efficient. Raw scores are then converted to corrected scores which can be corrected to grade equivalency, cumulative percent, and "T" score.

The advantages of this test are: it is adult-oriented; there are no grade level markings on the test itself; almost all students can answer some questions to their own satisfaction; and the cost is relatively low. Because the test is not timed, the student is more relaxed in facing a test situation. Because of this fact, it causes little disruption to test individually new students entering the class.

This test does not encompass grade levels above 7.9, it is not appropriate for those students who may be above this level of compentency in one or more areas.

2. The California Test Bureau's Test of Adult Basic Education

California Test Bureau, a Division of McGraw-Hill Book Company
Del Monte Research Park
Monterey, California 93940

The California Test Bureau's Test of Adult Basic Education is a comprehensive series of tests capable of testing adults at three levels of achievement. This testing instrument is actually composed of three different tests at varying levels of difficulty and a Practice and Locator Test.

The Practice Exercise and Locator Test, a short vocabulary test, is a pre-test situation which allows the student to become familiar with test procedures and mechanics and allows the teacher to decide the approximate level of the adult's achievement, so that the most appropriate test may be administered.

The student is then given the proper level of test from among:

> The Level E Test (Easy) is geared toward second through fourth grade, although the actual range is one through five.
>
> The Level M Test (Medium) is an adaptation of the Elementary Level of the California Achievement Tests and includes the range of second through tenth grade.
>
> The Level D Test (Difficult) is adapted to the Junior High level but ranges from grade eight to grade 13. This test was not utilized in this study since it was felt that the range of first through tenth grade level would be more than sufficient for the Adult Basic Education students.

The Level E Test is a consumable test booklet covering areas of reading, vocabulary, reading comprehension, arithmetic reasoning, and arithmetic fundamentals. The Level M Test includes these same areas and, in addition, tests for achievement in the mechanics of English and spelling. This test utilizes an answer sheet. Both "E" and "M" tests include small segmented tests which are timed.

The California Test Bureau's tests are adult-oriented. The use of a consumable test booklet at the "E" level is a distinct advantage to the low-achieving adult, since he is not confused by the use of an answer sheet. Grading this test is more time-consuming, since an answer sheet rather than a template must be used. The template, which is used to grade the Level M Test, is both easy and efficient to use.

All levels of the California Test Bureau's tests include profile sheets

which measure student growth and allow the instructor to diagnose the student's areas of learning difficulty.

DESCRIPTION OF EVALUATIVE PROCEDURES

A testing program involving five traditional Adult Basic Education classes, and four Adult Learning Laboratories is the basis for comparison of results using these two methods. Three classes, two Level I and one Level II, located at Stowe Adult Center, along with two classes, both Level III, located at the Clerical-Business Co-op Center of the Neighborhood Youth Corps, comprise the traditional classes which were involved in the testing program for this study. The Adult Learning Laboratories included laboratories at Stowe Adult Center, at General Hospital (made up of Neighborhood Youth Corps students), at the Urban Conservation Project Center (made up of construction trades trainees), and at another center providing adult basic education to students enrolled in Opportunities Industrialization Centers.

Both methods have advantages and disadvantages; therefore, it would be of great value to make comparisons of student achievement in these areas:

-- Does one methodology move the student faster than the other?

-- Is one methodology more effective than the other, depending upon the level of the student?

-- Are some programmed and individualized materials more effective than others?

Fifty hours of instruction was designated as the interval of testing. A total of one hundred hours of instruction (two fifty-hour intervals) was considered to be a reasonable period over which to extend the study.

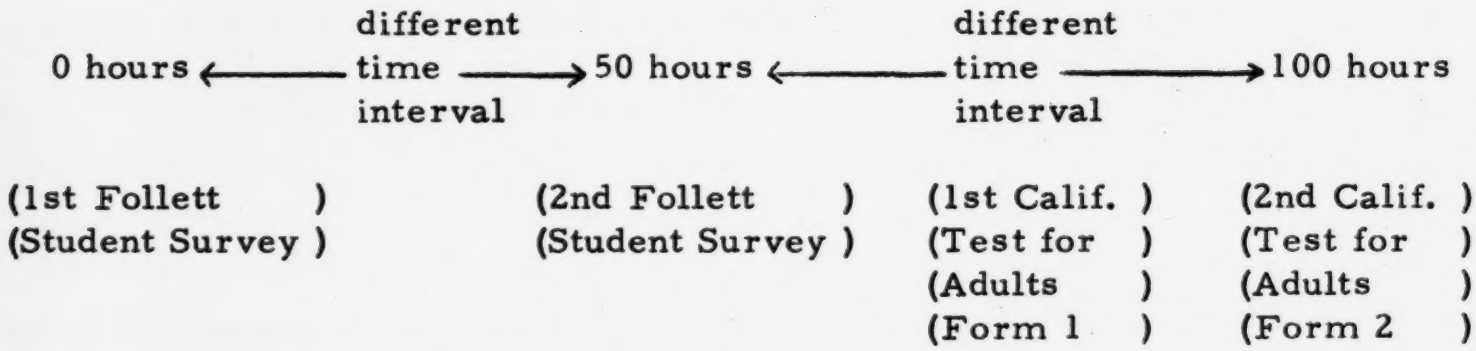
Because the five traditional classes involved in the study are scheduled to meet 2.5 hours daily, five days a week, each fifty-hour interval is a four-week period. In order to relieve the monotony of being tested three times in a two-month period, using the same test, a second test was chosen to be used for the second fifty-hour interval. It was felt that the use of two different tests would be motivating to the student. Testing then followed this pattern in the traditional classes:

0 hours ← 4 weeks →	50 hours ← 4 weeks →	100 hours
(1st Follett) (Student Survey)	(2nd Follett) (Student Survey)	(1st Calif.) (Test for) (Adults) (Form 1) — (2nd Calif.) (Test for) (Adults) (Form 2)

An added bonus of this testing schedule is the comparision of the Follett's
lett's Student Survey results with those of California Test Bureau's Test of Adult Basic Education, as the tests are given at the fifty-hour interval. This study provides an opportunity to check the correlation of the two tests.

In the Adult Learning Laboratory, test scheduling could not be planned in the same manner as in the case of traditional classes. The operating hours of the Adult Learning Laboratories vary considerably, to meet the needs of their settings. They may be open from two to six hours per day, five days per week, or scheduled for just one or two days each week. The scheduling of the student's time in the laboratory also varies to meet the needs of the individual. As a result, the testing program must of necessity become an individualized situation in much of the same way as the learning is individualized in the Adult Learning

Laboratory. Since students record time spent in the Learning Laboratory as a part of their record keeping, it becomes a simple matter for the instructor to note when the fifty-hour intervals accrue and to test individually. The pattern for testing in the laboratories would be:



In some cases, the second set of tests (test for Adult Basic Education) is not possible for the Adult Learning Laboratory student, for often these students accomplish their goals before spending one hundred hours in the laboratory setting. It should be remembered that all students are encouraged to complement time spent under instruction in the laboratory with time spent at home, as they proceed through their programmed material. Greater gains can be expected in relation to actual hours of instruction, depending on students' efforts outside of class or laboratory.

PROFILE OF STUDENTS INVOLVED IN STUDY

Students tested in this study varied from 0 grade through grade 8. Both male and female were tested and ages ranged from 18 to 51 or older. Some students were tested in traditional classroom settings while others were tested individually in Adult Learning Laboratories with time lapse control.

STUDENTS INVOLVED IN THE STUDY

Number of Students:	Traditional Classes	Adult Learning Laboratories
Level I (0-3)	49	24
Level II (4-6)	43	46
Level III (7-8)	12	46
TOTAL:	104	116

47% of the students in the Traditional Classes were Level I; while only 20% of the students in the Adult Learning Laboratories were Level I. The Adult Learning Laboratories found its greatest percentage on Level II and III which accounts for 80% of the students; while only 53% were in the Adult Learning Laboratories Level II and III.

Male	31	81
Female	73	35
TOTAL:	104	116

70% of the students in the Traditional Classes were female; while only 30% of the Adult Learning Laboratories were female. Therefore, 70% of the students in the Adult Learning Laboratories were male; while only 30% were in the Traditional Classes.

Ages:	18 - 21 yr.	46	74
	22 - 25 yr.	1	4
	26 - 30 yr.	3	3
	31 - 35 yr.	4	6
	36 - 40 yr.	8	5
	41 - 45 yr.	8	4
	46 - 50 yr.	9	6
	51 -	25	14
TOTAL:		104	116

70% of the students in the Adult Learning Laboratories were ages 18 - 30 years; while 48% fell within this range in the Traditional Classes. 52% of the students were in the range 31 and up in the Traditional Classes; while only 30% in this range were in the Adult Learning Laboratories.

Number of Students:	Traditional Classes	Adult Learning Laboratories
Grade Completed:		
0	6	4
1	19	1
2	1	0
3	5	7
4	12	3
5	1	1
6	4	7
7	2	6
8	4	22
* 9	5	25
* 10	12	23
* 11	8	7
* 12	24	8
Slow Learner	1	2
	104	116

Students in the Traditional Classes who formerly completed eighth grade and below were 52%; while 44% of the students in the Adult Learning Laboratories formerly completed eighth grade and below. 48% in the Traditional Classes completed formal schooling of 9th grade through the 12th grade; while the percentage for the Adult Learning Laboratories was 56%.

---

*Students tested and found to be functioning eighth grade or below in reading or arithmetic.

COMPILATION OF TEST DATA

These statistical reports represent the amount of grade level achievement gained during the 100 hour study as indicated by our test battery.

They are interpolated to show progress by (A) Grade Levels and (B) Class Style Type (e.g. traditional or adult learning laboratory).

THE TESTING

A study in Adult Basic Education faces all the usual trials of any testing endeavor; and, in addition, must contend with some special difficulties which accompany the testing of adults. Because the administration of tests produces a structured situation, many adults fear it and become tense. When the student does not understand the principle of speed yet wishes to complete each section of the test, the time element disturbs him. He complains that just after having gotten a good start into a section, he is suddenly told to stop. Some students fail to recognize that the results are invalidated after they have discussed the problems among themselves. Many do not understand why the teacher does not give them assistance, as he regularly does. Some suspect that the test results will be used to judge their worth as a person or to redirect their educational efforts. While some welcome a test as a change in routine or because they actually see its purposes, others resent this intrusion into their regular schedule.

An Adult Basic Education test program is further complicated by the frequent and often unavoidable absence of some of the adults. Also, in testing arithmetic achievement, the low reading level of some may constitute a block to greater performance in this section. This difficulty manifests itself among the foreign-born in our Level II traditional class. The student's age, health, and emotional stability are other variables which may render the results somewhat less valid.

Adults, who prior to enrollment, were non-readers, at the time of testing may not be able to take a test. These students show no testable gain and to the casual observer appear to be making no progress. In reality, however, these individuals frequently are achieving, so that now they can sign their names, determine the total cost of several purchases, or read traffic signs, gains which to these people and their teachers, are enormous. Some adults who come to the Adult Basic Education classes do so to improve in a selected area or have a very specific goal. For example, a student may need help with spelling or arithmetic or he may want to learn how to complete a job application form. This student may be well along toward his intended goal, and yet when there is testing will not show progress in the test areas in which he was not especially preparing. Other gains such as the development of self-confidence, poise, and purpose are not testable but do, in fact, accrue from study in the Adult Basic Education classroom or learning laboratory.

The teacher has means of evaluation other than the standardized test. He uses his own teacher-made tests in order to evaluate achievement in light of each student's own capacities and expectations. Tests built into programs also reveal student's strengths, weaknesses, and progress. Observation of performance remains the most significant method for evaluation on a daily basis.

To allay student fears engendered by testing, when the testing effort under consideration was initiated, the Adult Basic Education

teachers explained, in terms appropriate to the class, the purposes and means of testing.

Absences account for the disparity in total number of students tested and number tested in each 50 hour period. These absences result when students are ill, have outside responsibilities, or are in the job training phase of their program; or in the cases of the learning laboratory, many times the student had achieved his goals, left the laboratory and was no longer available for the testing the next 50 hours. To give the true picture of adult basic education through a testing program, the 0 scores for students too low to be tested were averaged in with the other results. Had the 0 gains accountable to them been taken out, the results would have been considerably higher.

MEDIAN GAINS OF STUDENTS IN THE TRADITIONAL CLASS FOR A TOTAL OF ONE HUNDRED HOURS OF INSTRUCTION

Reading Comprehension

Level I	+ .22
Level II	+ .46
Level III	+ .99
Total Median Gain (Level I, II, and III):	+ 1.67
Average Gain per Level:	+ .56

Reading Vocabulary

Level I	+ .30
Level II	+ .27
Level III	+ .76
Total Median Gain (Level I, II, and III):	+ 1.33
Average Gain per Level:	+ .44

Arithmetic Problems

Level I	+ .62
Level II	+ 1.47
Level III	+ .57
Total Median Gain (Level I, II, and III):	+ 2.66
Average Gain per Level:	+ .89

Arithmetic Concepts

Level I	+ .24
Level II	+ 1.63
Level III	+ .55
Total Median Gain (Level I, II, and III):	+ 2.42
Average Gain per Level:	+ .81

MEDIAN GAINS OF STUDENTS IN THE ADULT LEARNING LABORATORY FOR A TOTAL OF ONE HUNDRED HOURS OF INSTRUCTION

Reading Comprehension		Reading Vocabulary	
Level I	+ 2.10	Level I	+ .21
Level II	+ 1.92	Level II	+ .63
Level III	— .06	Level III	+ .37
Total Median Gain (Level I, II, and III):	+ 3.96	Total Median Gain (Level I, II, and III):	+ 1.21
Average Gain per Level:	+ 1.32	Average Gain per Level:	+ .40

Arithmetic Problems		Arithmetic Concepts	
Level I	+ .65	Level I	+ .50
Level II	+ 1.41	Level II	+ .54
Level III	+ 1.16	Level III	— .42
Total Median Gain (Level I, II, and III):	+ 3.20	Total Median Gain (Level I, II, and III):	+ .62
Average Gain per Level:	+ 1.07	Average Gain per Level:	+ .21

AVERAGE GAINS ACCORDING TO GRADE LEVEL AND TEST AREA

LEVEL I (0-3 GRADES)

Type of Class	Test Area	Number of Students	1st 50 Hours	Number of Students	2nd 50 Hours	Total Gains by level - 100 hours
TRADITIONAL	Reading Comprehension	18	.20	20	.02	.22
	Reading Vocabulary	29	.18	23	.12	.30
	Arithmetic Problems	29	.35	19	.27	.62
	Arithmetic Concepts	30	.24	12	.00	.24

LEVEL I (0-3 GRADES)

ADULT LEARNING LABORATORY	Reading Comprehension	17	1.30	8	.80	2.10
	Reading Vocabulary	22	.19	15	.02	.21
	Arithmetic Problems	19	.31	8	.34	.65
	Arithmetic Concepts	19	.35	7	.15	.50

AVERAGE GAINS ACCORDING TO GRADE LEVEL AND TEST AREA

LEVEL II (4-6 GRADES)

Type of Class	Test Area	Number of Students	1st 50 Hours	Number of Students	2nd 50 Hours	Total Gains by level - 100 Hours
TRADITIONAL	Reading Comprehension	8	.20	8	.26	.46
	Reading Vocabulary	8	.57	7	— .30	.27
	Arithmetic Problems	6	1.28	8	.19	1.47
	Arithmetic Concepts	7	1.04	6	.59	1.63

LEVEL II (4-6 GRADES)

ADULT LEARNING LABORATORY	Reading Comprehension	32	1.12	12	.80	1.92
	Reading Vocabulary	27	.43	10	.20	.63
	Arithmetic Problems	22	1.11	12	.30	1.41
	Arithmetic Concepts	26	.70	11	— .16	.54

AVERAGE GAINS ACCORDING TO GRADE LEVEL AND TEST AREA

LEVEL III (7-8 GRADES)

Type of Class	Test Area	Number of Students	1st 50 Hours	Number of Students	2nd 50 Hours	Total Gains by level - 100 hours
TRADITIONAL	Reading Comprehension	33	.38	41	.61	.99
	Reading Vocabulary	32	.40	40	.36	.76
	Arithmetic Problems	32	.02	40	.55	.57
	Arithmetic Concepts	29	.36	37	.19	.55

LEVEL III (7-8 GRADES)

ADULT LEARNING LABORATORY	Reading Comprehension	18	.34	3	— .40	— .06
	Reading Vocabulary	18	.37	3	.00	.37
	Arithmetic Problems	15	.41	2	.75	1.16
	Arithmetic Concepts	17	.38	1	— .80	— .42

MEDIAN GAINS ACCORDING TO TYPE OF CLASS

TRADITIONAL

Test Area	Number of Students	1st 50 Hours	Number of Students	2nd 50 Hours	Total Median Gain - 100 Hours
Reading Comprehension	59	.78	69	.89	1.67
Reading Vocabulary	69	1.15	70	.18	1.33
Arithmetic Problems	67	1.65	67	1.01	2.66
Arithmetic Concepts	66	1.64	55	.78	2.42

ADULT LEARNING LABORATORY

Reading Comprehension	67	2.76	23	1.20	3.96
Reading Vocabulary	67	.99	28	.22	1.21
Arithmetic Problems	56	1.80	22	1.40	3.20
Arithmetic Concepts	62	1.43	19	— .81	.62

This Table shows the number of students who participated in Level I, II, and III of the testing areas with their median gains after first fifty hours, after second fifty hours, and total gain over 100 hours.

SPECIAL REPORT SECTION - COMPILATION OF DATA

This special section is an evaluation of a 70 hour progress report of 22 students tested by a single pre-test and post-test method. This class utilized the Educational Developmental Laboratories' 300 Reading Program.

ADULT LEARNING LABORATORY USING EDUCATIONAL DEVELOPMENTAL LABORATORIES SOFT AND HARDWARE EQUIPMENT

The Educational Developmental Laboratories' 300 Reading Program was utilized in the Opportunities Industrialization Center. Only reading was taught. Since time spent in the learning situation was entirely on remedial reading and reading improvement, the data was not in the same pattern as that produced by the traditional and learning laboratory classes.

The pattern of testing for these students also varied to fit the need of the situation.

Mean gains of 22 students over an average of 70 hours of instruction:

Reading Comprehension:		Reading Vocabulary:	
Level I	+ 1.50	Level I	+ .52
Level II	+ 1.60	Level II	+ .93
Level III	+ 0.71	Level III	+ .81
TOTAL:	+ 3.81	TOTAL:	+ 2.26
AVERAGE:	+ 1.27	AVERAGE:	+ 0.75

Test Area Reading Comprehension Level I Class Type _____

Student No.	0 Hrs. Pre-Test Follett	70 Hrs. * Post-Test Follett	Difference Follett
7	2.4	4.5	+2.1
10	2.1	2.4	+ .3
13	1.6	2.3	+ .7
17	1.6	1.8	+ .2
23	1.8	4.4	+2.6
24	2.4		
27	1.8	3.1	+1.3
28	2.7	6.0	+3.3
32	1.3	3.4	+2.1
33	2.5	3.7	+1.2
*Average student time in Reading Laboratory.		TOTAL:	13.8
		AVERAGE:	+1.5

Test Area Reading Comprehension Level II Class Type _____

Student No.	0 Hrs. Pre-Test Follett	70 Hrs. * Post-Test Follett	Difference Follett
1	5.8	6.5	+ .7
5	5.8	7.9	+2.1
8	4.8	7.9	+3.1
11	3.8	4.8	+1.0
14	5.8	6.5	+ .7
15	5.2	6.0	+ .8
18	4.0	7.5	+3.5
19	4.8	6.0	+1.2
20	3.6	5.2	+1.6
21	4.6	6.0	+1.4
30	4.8	6.5	+1.7
31	3.8	5.2	+1.4
*Average student time in the reading Laboratory.		TOTAL:	19.2
		AVERAGE:	+1.6

Test Area Reading Comprehension Level III Class Type _____

Student No.	0 Hrs. Pre-Test Follett	70 Hrs. * Post-Test Follett	Difference Follett
2	6.5	7.5	+1.0
3	7.5	7.9	+ .4
4	7.0	7.0	0
6	7.5	7.9	+ .4
9	6.0	7.5	+1.5
12	7.5	7.9	+ .4
16	6.5	7.9	+1.4
22	6.5	7.5	+1.0
25	6.0	5.8	- .2
26	6.5	7.9	+1.4
29	6.0	6.5	+ .5
*Average student time in Reading Laboratory.		TOTAL:	7.8
		AVERAGE:	+ .71

Test Area Vocabulary Level 1 Class Type _____

Student No.	0 Hrs. Pre-Test Follett	70 Hrs. * Post-Test Follett	Difference Follett
7	4.8	5.6	+ .8
10	1.8	1.8	0
13	3.1	3.3	+ .2
17	0	1.0	+1.0
23	3.5	4.6	+1.1
24	1.8		
27	1.0	1.7	+ .7
28	5.6	5.9	+ .3
32	3.5	4.2	+ .7
33	4.7	4.6	- .1
*Average student time in Reading Laboratory.		TOTAL:	4.7
		AVERAGE:	+ .52

Test Area Vocabulary Level II Class Type _____

Student No.	0 Hrs. Pre-Test Follett	70 Hrs. * Post-Test Follett	Difference Follett
1	4.4	4.5	+ .1
5	4.9	7.0	+2.1
8	5.9	5.9	0
11	3.5	4.3	+ .8
14	6.0	7.9	+1.9
15	6.0	6.0	0
18	5.2	7.0	+1.8
19	4.8	5.9	+1.1
20	4.9	4.8	- .1
21	4.1	4.3	+ .2
30	6.5	7.9	+1.4
31	5.6	7.5	+1.9
		TOTAL:	11.2
		AVERAGE:	+ .93

*Average student time in Reading Laboratory.

Test Area Vocabulary Level III Class Type _____

Student No.	0 Hrs. Pre-Test Follett	70 Hrs. * Post-Test Follett	Difference Follett
2	7.5	7.9	+ .4
3	5.4	5.9	+ .5
4	4.5	7.9	+3.4
6	6.5	7.5	+1.0
9	5.9	6.5	+ .6
12	7.5	7.5	0
16	7.5	7.9	+ .4
22	4.4	4.8	+ .4
25	6.5	7.9	+1.4
26	5.9	6.5	+ .6
29	4.3	4.5	+ .2
*Average student time in Reading Laboratory.		TOTAL:	8.9
		AVERAGE:	+ .81

OBSERVATIONS FROM THE TEST RESULTS

While the test results are self-evident, analysis of them yield some significant observations.

1. Overall, definite gains were achieved by students at all levels, in the four test areas through both the traditional classroom and the adult learning laboratory.
2. The average gains indicate that both the traditional classroom and the adult learning laboratory serve the educational needs of all levels.
3. Since students at Level II generally showed the greatest achievement, we can conclude that their needs are being served best by both traditional and learning laboratory classes.
4. Improvement in reading comprehension was higher for Level I in the adult learning laboratory than in the traditional class, contrary to what was anticipated.
5. Level III gains, being somewhat lower than anticipated in both adult learning laboratories and traditional classes, indicate the need for more materials of both a traditional and programmed nature. Technically, these people could be expected to show greater gains; but because many work toward improvement in only one test area, they did not show gains in others.
6. There is some indication that the adult learning laboratory produces a larger average mean gain in learning during the first 50 hours of instruction.

7. The leveling off which occurs in learning after a good start in programmed materials evidenced itself here showing the need for strong teacher motivation and for other materials of a traditional type to be used.

CRITERIA FOR EVALUATING TEACHING MATERIALS FOR ADULT BASIC EDUCATION

The following criteria were used for evaluation of the programmed materials and boxed laboratories used in the Adult Basic Education classes and Adult Learning Laboratories.

CRITERIA FOR EVALUATION OF INDIVIDUAL AND PROGRAMMED MATERIALS

1. Physical Makeup

   - Pleasing colors are used
   - Materials and construction are durable
   - Type (print) is clear gradually becoming smaller as difficulty increases
   - Appearance is uncluttered
   - Covers are attractive
   - Illustrations are graphic
   - Codes replace traditional grade level identifications

2. Adult Appeal

   - Content is appropriate and of interest to adults
   - Subject matter has practical applications for adults in their daily lives
   - Various topics and types of reading are represented For example:

     fiction and non-fiction

     rural and urban living

     work and leisure

     men's and women's interests

     recent and classical literature

     domestic and foreign

   - Language used is conversational and natural while being adult in tone

- Content encourages self-respect and promotes personal growth of the learner

- Moral values are related without a sermonizing effect

3. Clarity of Directions

- An appropriate teacher's manual is available

- Directions for the student are simple, but complete

- Examples are illustrative

4. Sequential Introduction and Development of the Concepts

- Diagnostic instruments are provided

- Where needed, readiness exercises are included

- Each concept is thoroughly developed

- Skills development proceeds from the simplest to the most difficult

- Various word attack skills are taught

- Ample practice of comprehension and study skills is provided

- Arithmetic skills are carefully presented in sequence

5. Goal Setting and Motivational Devices

- The purposes for which the material may be used are identified

- Feedback is given

- Opportunities are given for frequent student self-evaluation

- Means for teacher evaluation are provided

- Further individual reading or study is stimulated

6. Provision for maximum progress according to ability of individual

- Lesson organization is flexible
- A variety of purposeful activities is provided
- Remedial and developmental instruction is facilitated
- Needless repetition is avoided
- Independent reading, and reading for enrichment or enjoyment are stimulated

7. Quantity and quality of correlated drill and study exercises

- Directions and examples are clear
- Drill provides for reenforcement of concepts and skills learned
- Real life applications are stressed
- Sufficient exercises are provided allowing teacher to be selective
- Answers may be recorded elsewhere eliminating consumption of materials
- Answers may be easily recorded, eliminating tedious "copying out" by students
- Answers for exercises are provided in a separate tear-out section of the material

8. Effective grade level

- Material is suitable for grade level for which it is indicated

9. Special Advantages

- Features which make the material superior
- Special uses for which it is especially good
- Strong content areas

- Methods especially helpful

These criteria were developed by the following Adult Basic Education teachers in the Cincinnati Public Schools: Mrs. Margaret Ruth Rice, Mrs. Ruth Schneider, Mrs. Joan Plock, Mrs. Roberta Stewart, and Mrs. Catherine Wolters.

DESCRIPTION OF TEACHING MATERIALS USED IN ADULT BASIC EDUCATION

Teacher evaluation and description of specific teaching materials used in Adult Basic Education and during this research study follows. They indicate the application of teaching materials to adult learner needs based on the preceeding criteria.

READING FOR UNDERSTANDING (SCIENCE RESEARCH ASSOCIATES)

This boxed unit called Reading For Understanding is one item in the inventory of many Adult Basic Education classes. It is used in the traditional class as well as in the adult learning laboratory.

Reading For Understanding comes packaged in a box less than 12 inches long. Four hundred 6" by 9" cards with instructional reading activities printed on front and back are included. There are four cards in each of 100 sections. Each four-card unit is of equal difficulty in its parts. The series is numerically filed and leveled. Each four-card set represents a progressive step toward an improved vocabulary and general reading comprehension level. The contents included are short two- and three-sentence paragraphs. The learner reads the paragraph, then the questions, and next records his reply in an answer book. Each paragraph is a self-contained unit of ideas independent of others in the series. Not only does the vocabulary become progressively more difficult, but the subject becomes more sophisticated as the learner progresses through the Reading For Understanding series.

Placement of students of third-grade level and above can be done with the use of the built-in Reading For Understanding test. Fifth-grade level readers can make the most dramatic step forward with this series and handle the materials with less frustration than third- or fourth-grade level students. Whatever score a student earns in the placement test, 1 to 100 possibly correct, he commences

2

to study at an equally appropriate card level.

Methodology here is simple. After placement a student is given a small handbook for recording his alphabetical replies to multiple choice questions. When a student is working at his own level he can usually read and complete one card in at least ten minutes, a boon to students with short attention spans.

After reading a card and writing his answers, the student, either alone or under the guidance of his laboratory instructor, can use keys provided to correct his work. On all card exercises there are ten possible replies; a score of eight or above indicates progress is being achieved.

Though these cards are not embellished with pictures or other art work, just simple black printing on white background with deep green borders, they seem to work well as an important item in more elaborate laboratory conditions. It is an invaluable part of the curriculum where mathematics and reading are offered to students concurrently. Some students with poor mathematical ability need a higher level challenge in reading programs. Since its scope is grades 3 to 12, Reading For Understanding can accomodate a majority of students who find themselves in Adult Basic Education situations.

Because Reading For Understanding is basically designed as a numerical filing system, it is easy to return cards used to their correct location.

The manual which accompanies this laboratory is simple to understand and relies on charts to show the laboratory instructor how to place students ini-

tially. A very few pages of suggested methodology are included.

This Reading For Understanding unit is valuable in a laboratory and in a classroom where reading skill improvement is provided. It is available in two editions. The one heretofore discussed is geared to basic education. The other similarly constructed unit is for higher achievement.

THE SULLIVAN READING SERIES
A BEHAVIORAL RESEARCH LABORATORIES PROGRAM

The Sullivan Reading Series is programmed instruction in reading for adults from the non-reader up through the eighth grade. It is excellent for the lower grades. The placement guide included at the end of this evaluation shows which books are suitable for a particular grade level.

Because each book is a different color, it can be easily identified. All the books are read one way on the right-hand pages only (pages 1 - 48), then the book is turned around and read back the other way (pages 49 - 96). Each page is divided into ten frames with an answer column along the left side of the page. The student covers the answer column with a slider provided. After the student reads the frame and answers it, he moves the slider down to uncover the correct response. When any new words are introduced, they are shown in the top two frames which are colored gray. A suggestion that might be made is that the frames be numbered, particularly in the books for the non-reader and the slower reader. Since some of these students have not yet developed the left to right eye movement, numbering the frames would help them.

Since these books are for adults, adult situations are used, and adults are used in the illustrations.

Included in this series are teachers' manuals for each series of four books, placement tests, progress tests, correlated readers, and a set of tapes.

The teachers' manuals are excellent and include complete instructions

for the teacher to tell the students when they are introduced to the program. With the exception of the A Readiness Book, the students are then able to work on their own, and to go from one book to the next with no further instructions from the teacher. The teacher works with the student in the A Readiness Book.

The four readiness books introduce the letters and two- and three-letter words. Book 1 uses only words with up to three letters. Each letter-sound combination is repeated frequently until the student becomes very sure of it. Gradually, longer words with three or more sounds are introduced. In Book 10 two-syllable words are introduced. The basics of English are taught along with the reading.

Since these are programmed texts, each students is started at the level of work he is capable of doing, as determined from the placement test. He is able to progress at his own rate of speed. These books also work well in a traditional classroom as an individualized program.

Since the student checks the answer to each question in the book as he answers it, he has a sense of self-evaluation. Four tests are given in each book, so the teacher has a frequent check on just how well the student is progressing. Progress tests for each side of every book also offer an additional measure of the student's achievements.

For each reading book there are three correlative readers. These are numbered the same as the reading book number and followed by an A or a B, or just the number alone. The correlative reader with the A after it is a story

book using the words used in the first half of the reading book with the same number; the one with the B after it is a story based on the words in the second half of the book, and the plain numbered correlated reader uses words from the entire programmed book. The students enjoy being able to read an entire story book.

The Behavioral Research Laboratories have also put out a series of tapes that accompany the Sullivan reading Books -- one for each of the books, 1 - 16. The voice on the tape reads exactly what is written on each page of the books. The students enjoy the auditory part while following along in the book. The students, particularly those just learning to read, benefit greatly from these tapes.

The review pages in each book include pair discriminations, synonym and homophone drills, and exercises in multiple meanings. Additional exercises in word discrimination, word formation and spelling can be made up from the vocabulary lists in the teachers' manuals if the teacher feels additional work is necessary.

PLACEMENT GUIDE
FOR
SULLIVAN READING AND MATH PROGRAMS

EQUIVALENT GRADE	1	2	3	4	5	6	7	8
Reading								
Programmed Reading								
BEHAVIORAL RESEARCH LABORATORIES	Reading Readiness							
	Books 1 and 2	Books 3, 4 and 5	Books 6 and 7	Books 8, 9 and 10	Books 11 and 12	Books 13, 14 and 15	Books 16 and 17	Books 18, 19 and 20
	Correl. Readers 1, 1a, 1b 2, 2a, 2b	Correl. Readers 3, 3a, 3b 4, 4a, 4b 5, 5a, 5b	Correl. Readers 6, 6a, 6b 7, 7a, 7b	Correlated Readers 8, 8a, 8b 9, 9a, 9b 10, 10a, 10b				

THE SCIENCE RESEARCH ASSOCIATES READING LABORATORY IIIa

The Science Research Associates Reading Laboratory IIIa is a neatly arranged, easily handled, boxed set of programmed materials. It has special appeal to the young adult as well as to older adult learners.

To evaluate its appeal and various factors in its values and student success quotient, the parts of the Science Research Associates Laboratory IIIa will be discussed separately. As a unit, however, it withstands considerable wear and tear.

The laboratory box itself is heavy gauge and its top can be employed as a receptacle for students' in-progress handbook files.

The box container is divided into smaller sections. In one is kept the Teacher's Manual. This manual is easily decoded by both experienced and inexperienced laboratory instructors. Since storage space is provided, the Teacher's Manual is available for quick reference.

Adjoining the Teacher's Manual, the Student Handbooks are stored. These can be stored here until future use. This Student Handbook, used to record efforts, grades, timing and progress, is well done.

The Readers' Handbooks, which contains stories and appropriate questions, are appealingly illustrated with simple artist-drawn pictures. These story illustrations observed by the learner, pre-set his attitudinal directions to his work and show him when he will need to give special attention to those

stories outside his personal interest. These readers are printed on heavy gauge, once-folded, leaf sheets of slick paper. They resist tearing and the surface is somewhat resistant to penciling and finger smudge.

The Rate Builder Cards are located in another section of the laboratory. They are made of paper similar to that used in the Readers' Handbooks and have approximately the same dimensions. These cards offer variety of practice for the learner and are directly related to the story series in their reading levels. More learning time is usually devoted to the learner's progress using the story series.

There are Answer Key Cards matching the story series and answer keys for the rate builder card set. The answer keys are easy to use, but, where cheating is a problem, the laboratory instructor may need to place key usage under his control. Mature students are not often tempted to cheat and abuse the honor system. Younger learners, fresh from all the tricks acquired in elementary and high school, sometimes want to get through with no effort. By controlling the use of the answer keys, the laboratory instructor may gradually loosen his grip as single learners start seeing progress coming from honest personal effort.

The entire laboratory is programmed to grade levels three through twelve, by a color key system. This system of grade leveling, with its added numerical markers, assists in easy location and replacement of parts; but, frequent use and some careless replacement of parts necessitate laboratory audits occasionally, to eliminate user frustrations.

Though there is space for recording time lapses required for completing the exercises, its use is optional. Some learners can perform better if not pressured by timing situations. Others progress further and faster if they are timed.

To expedite counseling, instruction for the laboratory usage and placement, some laboratory instructors use the following method: The handbook has an illustrated descriptive section on its method of use. At the outset, the laboratory instructor points out this section to the learner but can proceed with pencil markings on the sample story pages. This can be done with the following markings:

1. Observe picture
2. Understand title
3. Read first and last paragraphs
4. Read all of the story
5. Read and answer questions
6. Write the answers in the handbook

This method gives the instructor a few moments to scrutinize the student as he receives verbal directions. It provides an opportune time for counseling, if needed.

Any standardized test which indicates the learner's starting reading level may be used to place students into the color key grade-related system. Such reliance on initial testing is more properly used without a dogmatic approach. Some learners are fearful or ill at ease when taking the first such standardized test.

If a learner enters laboratory work with poor foundations in phonetic

pronunciation, he may experience some difficulty in using this laboratory by himself, especially if he ranks anywhere in the orange through blue levels (third to fifth grades). At these levels, the instructor may assume a more directive role in the student-learning scene.

The process involved in the study laboratory is not simply reading for assimilation as the work exercises encourage vocabulary building and study of language structure.

The story series is directed to both typical male and female interest areas. As the level gets higher, the content concurrently gets more concentrated and sophisticated.

Some subjects need no further study. The Student Record Books have progress tests which appeal to adults because the progress tests indicate the student's improvement after he has worked with the cards and diagnostic tests.

The Diagnostic Tests are in black and white with a gray horizontal bar across each sheet. These sheets appeal to adults because they are easy to read.

The Exercise Cards and Diagnostic Tests allow the student to practice a specific skill. The student likes these tests because the answers to the Diagnostic Tests are in his Student Record Book; he can check his own work.

PROGRAMMED MATHEMATICS FOR ADULTS
A SULLIVAN ASSOCIATES PROGRAM

Programmed Mathematics for Adults is a self-instructional course for adults. Series I (Books 1 - 4) covers the basic operations of addition, subtraction, multiplication, and division. Series II (Books 6 - 10) teaches fractions, decimals, common measurements, basic consumer and personal mathematics.

Series I includes five programmed workbooks, five word problem books, a book of progress tests, a placement test, an achievement test, a final word problem test and an instructor's manual. Series II includes the same items with the exception of the word problem books and the final word problem tests. Word problem books and tests are included only for Books 6 and 7.

Each workbook is a different color, so it can easily be identified. The problem book is the same color as its corresponding workbook.

Each workbook is divided into six-page lesson units with the sixth page being a short review test which the students score themselves. Pages 48 and 96 of each book are examinations that the teacher grades. Each workbook is read through on the right-hand pages only, then turned around and read back, again on the right-hand pages only. Every page is divided into frames, with each frame containing a problem or set of problems. The student covers the answer column on the left side of the page with a slider, and after working each problem he moves the slider down to check his answer with the correct

answer. New concepts are introduced in gray-colored frames so the student knows something new is being shown and no answer is expected.

The placement examination is administered before the student begins working in the program to determine where each student should start. Two placement examinations--one for use with Series I and one for Series II are provided. There are two achievement examinations also. One is given at the end of Book 5 and the other is given at the end of Book 10.

Six progress tests for each book are included in separate test booklets--one booklet for Series I and one for Series II.

The problem booklets contain simple "Word Problems" that allow the student to apply his mathematical knowledge to problems in his own everyday life. Each two-page unit corresponds to a lesson unit in the workbook, so the student can review in the workbook any areas where he is experiencing difficulty. If the class is one where each student is working independently, the student who has finished a given book will be given the corresponding problem book. Where all the students in the class are working at approximately the same level, the students who finish a given unit before the others can then work the appropriate pages in the problem book. If the students happen to be poor readers, it is best to have them work Books I through 5 first, before giving them any of the problem booklets. The vocabulary used in the problem books is rather advanced for the corresponding grade level. (See the placement guide included for the corresponding grade and reading level.)

The teachers' manuals are excellent and include complete instructions to tell the students when they are first introduced to the program. Complete instructions for giving and scoring the placement tests, the achievement tests, and the progress tests are given. In addition, each teacher's manual contains a content summary which tells unit by unit what each book offers and what achievement level is attained by the end of each book. For example, by the end of Book 1 the student should be able to add any combination of numbers up to 99 where no regrouping is involved. By the end of Book 2 the student has mastered the concept of regrouping and should be able to solve any problem requiring the addition of whole numbers. These achievement levels given for each book can be very helpful to the teacher, since the goals for each book are clearly stated here.

Because this is a programmed course for adults, the teacher does not need to spend much class time presenting the material. This leaves the teacher free to give each student individual attention and help; praise and encouragement. Additional practice in each type of problem can be given through classroom exercises and drills.

Sullivan Programmed Mathematics seems to be most effective with an adult student who is just starting mathematics and has little or no knowledge of the subject, or with the adult student who is having problems in one particular area. The books on multiplication, division, and fractions are particularly recommended for students with problems in these areas.

The books on measurements and consumer and personal mathematics

are especially helpful to the student who wants to be able to compare costs of many everyday articles, and to be able to control his spending by using these cost comparisons. Practical applications enhance the usefulness of these books for the adult student.

PROGRAMMED MATHEMATICS FOR ADULTS
A SULLIVAN ASSOCIATES PROGRAM

GRADE EQUIVALENCY	1	2	3	4
	Book 1	Book 2	Book 3	Book 4
		Problem Book 1	Problem Book 2	Problem Book 3

GRADE EQUIVALENCY	5	6	7	8
	Book 5	Book 6	Book 7	
	Problem Book 4	Problem Book 5	Problem Book 6	Problem Book 7

EDUCATIONAL DEVELOPMENTAL LABORATORIES, INC.

The Educational Developmental Laboratories Reading Laboratory is an attractive, pleasant, business-like system through which adults work to acquire and improve various communicational skills. Because the materials have been carefully designed, with attractive covers and suitable illustrations, they are of immediate interest to the students. Content of the materials has been arranged within instructional levels, so that the student can proceed in a logical, sequential, way. Instructional levels correspond to grade levels and are so coded that the teacher and the students (with training) can easily follow them.

Focusing on such adult-oriented topics as consumer education and job requirements, the content of the Educational Developmental Laboratory material is purposeful. Much of the content is new, having been created or adapted especially for the Educational Developmental Laboratory.

Twelve comprehensive skill areas, as defined by Educational Developmental Laboratories, are developed. Directions for use of the equipment, techniques, and materials are graphic and are nearly always clear. Generally, persons reading at the third grade level and above are able, independently, to follow the directions. For those reading below third grade, the teacher must occasionally supplement the printed instructions.

Drills for skills development appear to be adequate for their purposes. While the teacher remains the main instrument in the classroom for helping the

student establish goals, the multi-sensory approach employing numerous audio-visuals is extrinsically motivating.

One of the strongest qualities of the Educational Developmental Laboratories is its structuring, which permits the student to progress at his own rate. Individual and small group instruction are featured throughout. Frequent evaluation of progress by the individual is provided. Those who have had remedial reading, are delighted to find a completely new and fresh approach. Students who have had poor past relationships with teachers now have the opportunity to learn with a minimum of instruction and supervision. Meanwhile, for those who need the help and assurance of a teacher, there is ample opportunity for this type of relationship to develop. Educational Developmental Laboratories recommends starting students one level below that established by diagnostic tests (using Follett Adult Survey at Opportunities Industrialization Center) or by the sight vocabulary on Flash-X discs.

Initial testing should be diagnostic, as well as indicative of grade level. To permit the establishment of realistic individual goals, test results should also indicate the student's general ability to learn.

Frequent spot checking must be done by the teacher, so that the student does not just "cover the material". In order that the improperly motivated student does not yield to the temptation to copy answers from the keys, goals must be developed and left clear.

Care must be taken so that the student learns, to the best of his ability,

how to handle and operate the equipment. Lack of such training will cause unnecessary damage. Some few students so fear responsibility for breakage that they need special help in becoming comfortable working with the machines.

APPENDIX I
CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING EDUCATION

STOWE ADULT CENTER - EXTENSION OPERATIONS

Since its inception in 1962, Stowe Adult Center has worked with many agencies and associations to bring adult education to the people. The result has been the setting up of centers throughout the city which bring basic education by itself or in connection with vocational education to many who find it impossible to come to Stowe Adult Center.

The initial contact was with the Hamilton County Welfare Department which cooperated very closely in the organization of adult basic education classes at Stowe Adult Center and Millvale Court. The program at the latter combined adult basic education and home nurse aide training with referrals made by welfare.

The Cincinnati Metropolitan Housing Authority made classroom space available for use in adult basic education at English Woods, Stanley Rowe Towers, Laurel Homes, Millvale, and Winton Terrace housing projects for centers.

A large number of classes were organized in cooperation with the Neighborhood Youth Corps. These centers offer adult basic education in connection with the vocational training, preparation for the eighth grade equivalence test and/or self-improvement. Also, in cooperation with Neighborhood Youth Corps, a class for youth working with the City of Cincinnati was arranged

from 7:30 a.m. to 8:30 a.m. as part of their work day in the Municipal Garage. Classes were set up in Saint Joseph's Church, United Christian Church; as well as Longview, General, and Rollman Hospitals.

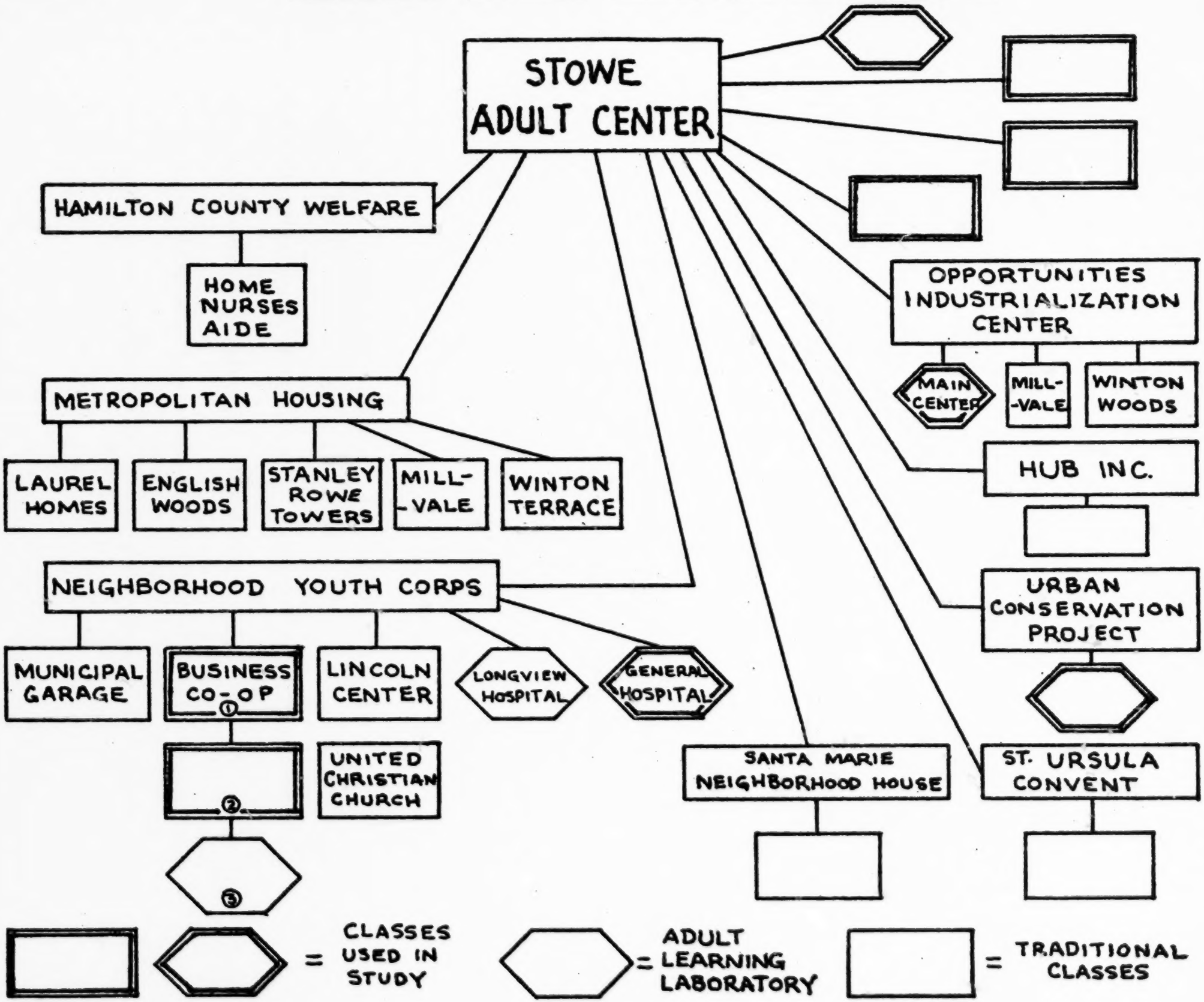
Opportunities Industrialization Center, has worked out, in cooperation with Continuing Education, a series of classes and reading laboratories. These are located at Holy Name Church, Millvale Center, and the Opportunities Industrialization Center in Winton Woods. Once again these adult basic education classes aim toward self-improvement, improvement in vocational areas, and preparation for the eighth grade equivalency test.

To meet the needs of trainees in the Construction trades, an adult basic education class has been established at Urban Conservation on Reading Road. The emphasis there is on the up-grading of reading and mathematical skills in a laboratory situation. In cooperation with the HUB Services, Incorporated, a class was organized at Emmanuel Center for self-improvement.

A Sunday afternoon class was organized in cooperation with Saint Ursula Convent and Academy on McMillan Street because there was a special need in the Walnut Hills area. A second class was created in cooperation with the Santa Maria Neighborhood House in the Price Hill area.

When any community agency recognizes a need for basic education, the Cincinnati Public Schools, through the Division of Continuing Education, is always ready to discuss their requirements and, where possible, establish a program.

STOWE ADULT CENTER EXTENSIONS



APPENDIX I

CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING ED.
STOWE ADULT CENTER EXTENSIONS

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APPENDIX II
CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING EDUCATION

METHODS IN THE TRADITIONAL ADULT BASIC EDUCATION CLASSES

Adult basic education classes at Stowe Adult Center and at the Neighborhood Youth Corps are representative of the traditional adult basic education classroom -- its curriculum, materials, and methodology. While the Neighborhood Youth Corps classes are illustrative of those connected with a community agency, the traditional adult basic education classes at Stowe Adult Center function independently of any specific agency or job-training program and yet cooperate with all or any agencies or programs.

Adult basic education traditional classes at Stowe Adult Center serve adults young and old, men and women, migrants from rural areas, and lifelong urban residents; and, while not intended to be Americanization classes, they do serve even the foreign-born.

The traditional adult basic education class uses diverse methods and techniques. Borrowing from elementary and secondary education practice and applying sound adult education principles, the adult basic education teacher provides an unique learning situation designed for its special purposes.

Selection of appropriate materials and methods for instruction and evaluation is the continuing responsibility of the classroom teacher. Combining knowledge of adult basic education classroom organization and procedures suggested in recent publications with one's own resourcefulness, the

teacher plans each session with student needs in mind. No one system has proved to be superior to any other, so that an eclectic approach generally prevails. Adults appreciate the security that routine provides but also enjoy the stimulation of the unexpected. Thoughtful planning provides for both.

Three basic types of teaching recommend themselves. While some instruction of the entire class is desirable, most is done in several smaller groups, with planned and extemporized individual instruction interspersed.

The traditional class provides a daily opportunity for its members to consider newsworthy topics of the day. For some, this is the only cohesive group to which they belong. For many, this is the only opportunity for exercise of good discussion and listening practices. The discussion permits verbalization, including expression of opinions, and facilitates vocabulary development; while it frequently leads to consideration of a scientific, historic, or civic event. Because so few adult learners subscribe to a daily newspaper and, in some cases, do not have television, this disucssion is virtually their only source of current events.

Recognizing the diversity of achievement, ability, motivation and interest of the individuals, the teacher divides his students into reading groups for instruction. Assignments are consonant with the abilities and purposes of the members. Generally, three groups are formed but in some cases four develop, or two suffice. Constant reevaluation and occasional reassignment of the groups are imperative.

Cognizant of the unique needs of each learner, the adult basic educa-

tion teacher spends as much time as possible with each individual. Goal-setting, clarification, illustration, and evaluation are frequently accomplished to help fulfill these unique needs of the students.

For the beginning reader, instruction includes the development of reading readiness, acquisition of a sight vocabulary, introduction to phonics, use of configuration and contextual clues, structural analysis and other word attack skills. During this phase of instruction, as in all others, emphasis is not on the process of reading but, rather, on the meaning and purposes of print.

Subsequent instruction emphasizes the skills of vocabulary building, location, organization, and comprehension. Various purposes of reading are identified, so that the learner develops good habits of skimming for information, selecting pertinent facts for retention, comparing and contrasting ideas, re-reading for verification or recall, interpreting motives, understanding and following directions, seeing events in order, and distinguishing between fact and opinion.

The more advanced adult learner uses the dictionary, summarizes a story, prepares a simple outline, expands his reading vocabulary to include technical words, reads more than one source for information on a topic, and develops his ability to enjoy good literature.

Throughout adult reading education, functional skills predominate in order that the learner may read and interpret signs, obtain a driver's license, locate places, read want ads, fill out an application, use grocery

ads for preparing his shopping list, or ready himself for a job training program.

Language arts instruction is integrated with the reading program. Skills in listening, speaking, spelling, writing, and reading are taught concurrently.

Ideally, students are grouped for arithmetic instruction as for reading. In reality, however, individual differences are so marked in arithmetic achievement that teaching of this subject is often done in groups of two or three or even individually. Computational skills are developed with many opportunities for application, through the use of word problems.

The area of general knowledge or content lends itself to topical organization. Using the unit for organization and presentation, adult basic education provides meaningful instruction in consumer education, civics, and job requirements.

Experience with adult learners reveals certain special considerations. The teacher of beginning students, for example, instructs best in close proximity to his students, for work on a distant chalkboard or projected overhead add not only physical but also cognitive distance. Where workbooks are used, caution should be exercised so that their use does not become mere busy-work. Periods of study should be adequate for their purposes, but brief. Opportunities for review and practice must be frequent. Practical applications of skills learned must be demonstrated.

Whether to use student first names or last, to assign homework or not, to consume materials or save, are operational questions resolved locally by the individual classroom teacher and the individual students.

Aware that the undereducated adult may be shy and uneasy about enrollment, the teacher provides the new student a reassuring greeting and introduction to his prospective classmates. Because of the threat which it may pose, no formal testing is done during the first days until positive teacher-student rapport has been established. Since, however, both student and teacher are anxious to begin specific work, a rough indication of the student needs must be ascertained, requiring the administration of an individual, informal, oral reading survey. After browsing through several books of varying difficulty, the student reads orally, thereby giving a quick general assessment; or a simple teacher-made test may be given. Care must be taken to explain that several sessions are required for thorough diagnosis and correct placement. Determination of student goals during these critical early sessions is essential for appropriate planning. Gradually, various diagnostic techniques, including formal testing, are used.

Evaluation is an ongoing process. A cumulative folder for each student contains informal and formal tests, interviews with the student, anecdotal records, notes of teacher observations, comments by counselors and others, and any additional data useful for assessment of student progress.

APPENDIX III
CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING EDUCATION

MATERIALS IN TRADITIONAL ADULT BASIC EDUCATION CLASSES

Instruction in the traditional adult basic education class centers about printed materials. Recently adult basic education teachers have had available to them greater variety and higher quality items than ever before, permitting for the first time the luxury of selection. The need exists, however, for still better, more adequate prepared materials.

For initial instruction in reading, the traditional class uses a variety of materials, each of which has its own merits. Behavioral Research Laboratories (Sullivan) programmed workbooks and readers have proved especially instructive for the non-reading adult. Included in this series are four workbooks which systematically develop reading readiness. Important also are the Reader's Digest Services' Skill Builders, Noble and Noble's How We Live, Live and Learn and From Words to Stories and the Follett publication's Reading For a Purpose, Getting Started, On the Way, and Full Speed Ahead. Operation Alphabet, a television home study work book by the National Association of Public School Adult Education, was designed for home use with a television program, but has been used successfully for regular classroom instruction.

As the learner progresses in Level I, he enjoys Holt, Rinehart, and Winston's Life With the Lucketts and The Thomases Live Here.

Level II students use as readers the Webster Division of McGraw-Hill Publishing Company's Step Up Your Reading Power series featuring stories

of high interest and instant appeal for adults and older youths. Good reading is also found in Regents Publishing Company's Elementary Reader in English, Modern Short Stories in English, and Easy Reading Selection in English. Laubach New Readers Press has published We Honor Them, Volumes 1 and 2 containing stories of Negroes in American Life and Martin Luther King, Jr., a biography. News For You, an adult newspaper published weekly by Laubach in Edition A for Level II, is a mainstay in adult basic education.

Provision is made for independent reading at Level II through the use of reading kits including Science Research Associates' Reading Laboratories and Reading For Understanding and Webster's Step Up Your Reading Power.

Reading instructions at Level III, as known at previous levels, diminish and are replaced largely by reading for content. When review, further development of skills, or enrichment are required, the Science Research Laboratories' Laboratory and Readers Digest Improve Your Reading and Advanced Skill Builders are available. These students enjoy Steck-Vaughn's workbook of reading activities Just For Fun, I and Laubach's News For You, Edition B.

Printed materials available for language arts instruction are useful when the teacher is discriminating and selective among the topics presented. At Level I, Steck-Vaughn's worktexts, I Want to Read and Write and the Adult Reader, provide good practice where they are consumable. Follett's Reading for a Purpose has language arts features for Levels I and II. Steck-Vaughn's worktext, Learning and Writing English, serves Level II. Holt's English has

been used successfully here also. For Level III, the Steck-Vaughn's publication, English Essentials, and Holt's English for Adults are instructive.

Handwriting Masters, by the Continental Press, Inc., are excellent for manuscript and cursive practice.

Whole numbers through fractions may be found in Holt's Arithmetic, which is followed by their more advanced Fundamentals of Mathematics. Steck-Vaughn's worktext, Working With Numbers, is an excellent refresher course. Behavioral Research Laboratories' programmed arithmetic series has proved to be valuable.

Holt, Rinehart, and Winston has published a number of adult basic education books which contribute to the students' general knowledge of subject matter. At Level I, Get Your Money's Worth instructs in the area of consumer education. Levels II and III use Science, You and the Law, American History, Principles of Geography, and Earth and Space Science. Reader's Digest Science Readers may be used at Levels I and II. Articles in News for You offer information pertinent to history, consumer affairs, current events, geography, health and safety, and job requirements. An excellent series of wall maps, focusing on worldwide newsworthy places and people is published twice each month by the Civic Education Services, Inc.

A globe, counting frame, dictionaires, bulletin boards, exhibits and, of course, the chalkboard are essential, traditional, classroom equipment. Adult basic education also uses films, filmstrips, tapes, and the overhead and

opaque projectors. Resource persons serve as speakers and an occasional field trip provides a common experience for all who attend.

For instructional purposes, adult basic education classes frequently use pamphlets, flyers, and other such literature about topics such as Social Security, travel, consumer affairs, and voting information. Newspaper food advertisements, classified ads, the telephone directory, employment applications, labels, and income tax forms are among the diverse items practical for classroom use.

In adult basic education there is periodic reevaluation of the materials currently in use and a constant search for newer and more effective materials by supervisors, coordinators, and teachers.

APPENDIX IV
CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING EDUCATION

METHODS IN THE ADULT LEARNING LABORATORY CLASS

Briefly, the instructional methods of an adult learning laboratory involves these steps:

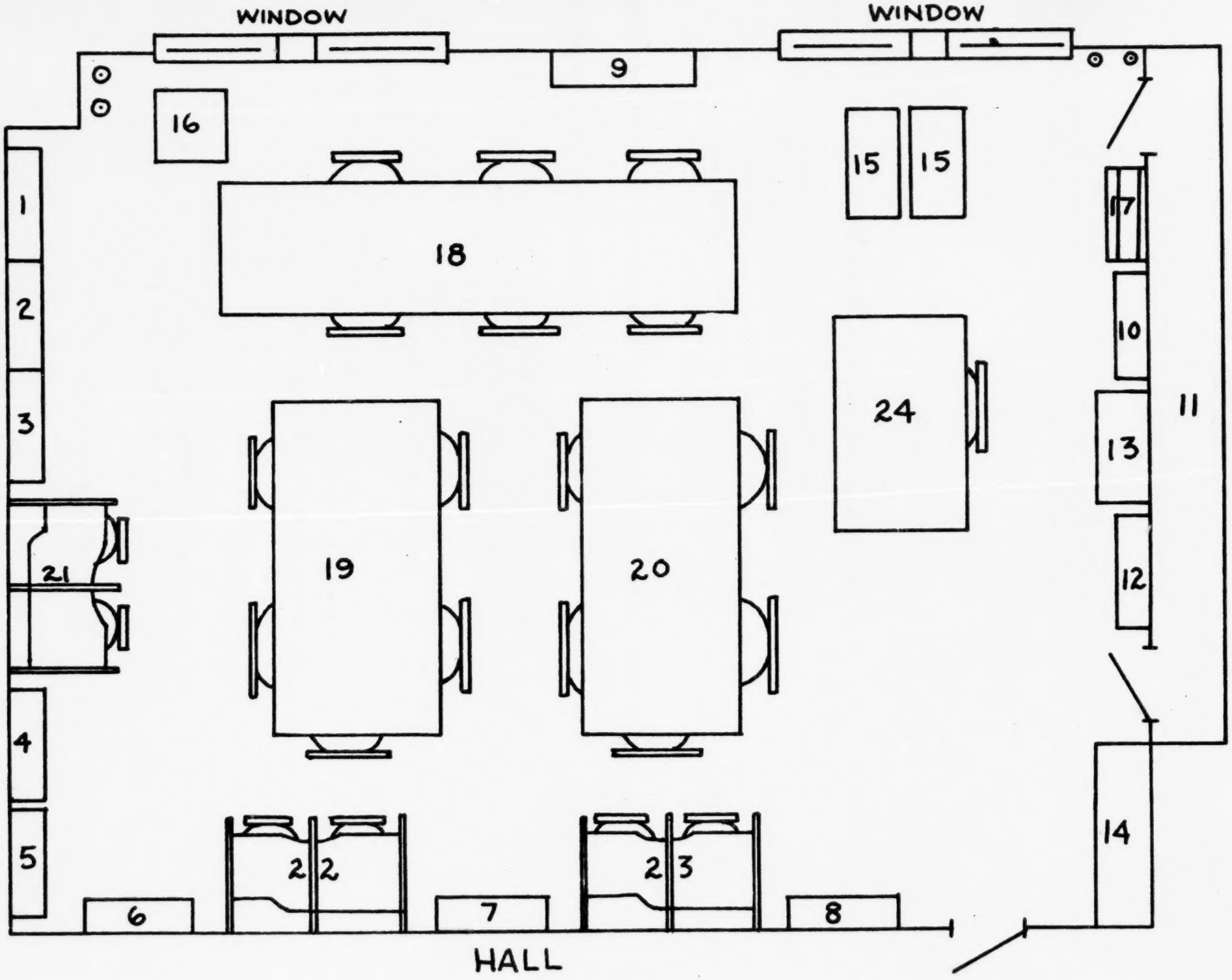
1. The student is interviewed in order to establish rapport between student and instructor and in order for the instructor to assess the student's general abilities and objectives. The instructor fills in a Personal Data Guide, a form which furnishes information used for placement and provide avenues of continuing communication between student and teacher.

2. The student is introduced to the physical facilities and is provided an orientation to the instructive means of the laboratory. In some cases, several sessions are required for these introductory steps.

3. Upon explaining the need for diagnostic testing the instructor administers to the student a reading and arithmetic inventory. After the tests are scored and the results evaluated, programs of instruction are selected and introduced to the student; so that he may move from where he is to where he wants to go. Many times the student's goals are not commensurate with

his abilities. In this case, the student is encouraged to plan intermediate goals, so that he may find immediate success.

4. Having been introduced to the programs to be used and taught how to use them, the student begins to work his way through the assigned material. The teacher, by means of his continued interest, encouragement, supplementary explanations, evaluation and counsel, assists the student in fulfilling his maximum potential.



1. BOOKCASE-WOOD
2. " " "
3. " " "
4. " " "
5. " " "
6. " " "
7. " " "
8. " " "
9. BOOKCASE-METAL
10. " " "
11. COATROOM
12. BOOKCASE - METAL
13. CABINET - METAL
14. " - WOOD
15. FILING CABINET
16. CABINET - METAL
17. COAT RACK
18. TABLE - WOOD
19. " "
20. " "
21. CARREL BOOTH
22. " "
23. " "
24. DESK - METAL

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APPENDIX V
CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING EDUCATION

PROGRAMMED, NON-PROGRAMMED, AND INDIVIDUALIZED MATERIALS IN ADULT LEARNING LABORATORIES

PROGRAMMED

PUBLISHERS	MATERIALS
Behavioral Research Laboratories	Reading Readiness
	Textbook A
	Textbook B
	Textbook C
	Textbook D
	Teacher's Manual
	Placement Tests
	Sullivan Remedial Reading Program
	Sullivan Programmed Reading Series I
	Sullivan Programmed Reading Series II
	Sullivan Programmed Reading Series III
	Sullivan Programmed Reading Series IV
	Sullivan Programmed Reading Series V
	Sullivan Programmed Reading Correlated Readers
	Sullivan Programmed Reading Correlated Readers
	Teacher's Manual Series I
	Teacher's Manual Series II
	Teacher's Manual Series III
	Teacher's Manual Series IV
	Teacher's Manual Series V
	Progress Tests Series I
	Progress Tests Series II
	Progress Tests Series III
	Progress Tests Series IV
	Progress Tests Series V
	Correlated Readers
	Books 1, 1a, 1b, through 12

PUBLISHERS	MATERIALS
Behavioral Research Laboratories Cont'd	**The Consumer Mathematics Series** The Paycheck Teacher's Manual Test Booklets The Household Budget Teacher's Manual Test Booklets The Wise Buyer Teacher's Manual Test Booklets Income Tax Teacher's Manual Test Booklets Insurance Teacher's Manual Test Booklets United States Constitution Text Teacher's Manual Test Booklets American Government Volume I & II (set) Teacher's Manual for Volume I & II (set) Test Booklets for Volume I & II
Educational Developmental Laboratories	**Word Clues** Book G Book H Book I
Encyclopaedia Britannica Press	Seventh Grade Mathematics with supplements Teacher's Manuals Extra Supplements Test Booklets
Harcourt, Brace and World	English 2200 with test booklets Teacher's Manual with answer key

PUBLISHERS	MATERIALS
Harcourt, Brace and World Cont'd	English 2600 with test booklets Teacher's Manual with answer key
McGraw-Hill	Programmed Mathematics for Adults Book I (61851) Problems Book (61761) Addition
	Programmed Mathematics for Adults Book II (61854) Problems Book (61762) Addition
	Programmed Mathematics for Adults Book III (61855) Problems Book (61763) Advanced Addition
	Programmed Mathematics for Adults Book IV (61856) Problems Book (61864) Multiplication
	Programmed Mathematics for Adults Book V (61857) Problems Book (61865) Division
	Programmed Mathematics for Adults Book VI (61858) Problems Book (61866) Fractions
	Programmed Mathematics for Adults Book VII (61859) Problems Book (61867) Decimals
	New Practice Readers Books A-G (Grades 2-8) Reading Shelf
NON-PROGRAMMED	
Barron	How to Prepare for High School Entrance Examination
INDIVIDUALIZED	
Continental Press, Inc.	Handwriting Masters Letter Writing
Follett	American History Study Lessons (9 booklets) (0430) Teacher's Guide (0431) Unit Test and Key (0434) Comprehension Check Workbooks (0432)
	Individualized English Set J

PUBLISHERS	MATERIALS
Follett Cont'd	Step Up Your Reading Power Individual Card Program
Science Research Associates	Pen Skills II Kit
	Reading for Understanding Student Record Books
	Reading Laboratory (IIIA Edition) Student Record Books
	Computational Skills Laboratory Student Record Books
	Words (Vocabulary) with tests Teacher's Manuals

APPENDIX VI
CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING EDUCATION

HARDWARE FOR ADULT LEARNING LABORATORY

PUBLISHERS	MATERIALS
Educational Developmental Laboratories	Controlled Reader, Jr. Filmstrip Stories for Controlled Reader: AA - Story Filmstrip (1st grade-adult) BA - Story Filmstrip (2nd grade-adult) CA - Story Filmstrip (3rd grade-adult) DA - Story Filmstrip (4th grade-adult) EA - Story Filmstrip (5th grade-adult) FA - Story Filmstrip (6th grade-adult) G-H Story Filmstrip (7th & 8th grade-adult) H-G Story Filmstrip (7th & 8th grade-adult) Study Guides for each set of Filmstrips, each (4 or 5 for each grade level needed) AR- 1-2-3: Arithmetic Story Problems
Central Scientific Company	Cenco Headsets Prepared Tapes: Sound Teaching of American English Oral Pattern Drills in Fundamental English Pronunciation Exercises in English
Behavioral Research Laboratories	Prepared Tapes: Tapes Correlated to Sullivan Reading Program: 8 Tapes, Books 1 - 8 8 Tapes, Books 9 - 16

PUBLISHERS	MATERIALS
Behavioral Research Laboratories Cont'd	Tapes Correlated to Sullivan Readers: 4 Tapes for Readers 1A - 8A 4 Tapes for Readers 1B - 8B 4 Tapes for Readers 1 - 8 2 Tapes for Readers 9 - 12
Didactics Corporation	Didactor Films to be used with Didactor: Arithmetic 1. How to Add Simple Numbers 2. How to Add Large Numbers 3. How to Subtract Simple Numbers, Part I How to Subtract Simple Numbers, Part II 4. How to Subtract Large Numbers 5. How to Multiply Simple Numbers 6. How to Multiply Large Numbers 7. How to Divide Simple Numbers, Part I How to Divide Simple Numbers, Part II 8. How to Divide Large Numbers, Part I How to Divide Large Numbers, Part II 9. Introduction to Arithmetic 10. Common Fractions-Addition and Subtraction 11. Common Fractions-Multiplication and Division 12. How to Read and Write Decimals 13. Decimal Equivalents

PUBLISHERS	MATERIALS
Didactics Corporation Cont'd	Didactor Continued

Reading

1. Picture-Word Association, Part I
   Picture-Word Association, Part II
   Picture-Word Association, Part III

2. New Special Programs in Living and Reading Skills
   1. The Lie
   2. The Four Musketeers
   3. Teamwork
   4. Confidence
   5. The Decision
   6. Nobody Understands Me
   7. Hello Trouble
   8. Sticky Fingers
   9. Popularity?
   10. The Big Kick
   11. The Party
   12. The Dilemma
   13. The Clown
   14. The Dropout
   15. Talk is Cheaper
   16. To Be Free
   17. The Eight-Point Bet

.....

Tape Recorders
(any make or price available)

Honor Products

Honor Teaching Machine

Honor Rolls:

Remedial Mathematics

1. Elementary Arithmetic - Addition I
   Elementary Arithmetic - Subtraction I

2. Solving Arithmetic Word Problems

3. Fractions I
   Fractions II

PUBLISHERS	MATERIALS
Honor Products Cont'd	Honor Rolls Continued:
	Remedial Mathematics Continued:
	4. Multiplication and Division I Multiplication and Division II
	5. The Story of Measurements
	Spelling
	1. Spelling Magic
	2. Spelling Power
	Vocabulary
	1. Fun with Words
	2. Building Words
	3. Persuasive Words
	4. Word Clues
	5. Synonyms and Antonyms
	6. Vocabulary Building I Vocabulary Building II

APPENDIX VII
CINCINNATI PUBLIC SCHOOLS
DIVISION OF CONTINUING EDUCATION

PUBLISHERS AND ADDRESSES

Barron's Education Series, Inc., 113 Crossways Park Drive, Woodbury, New York, 11797.

Behavioral Research Laboratories, Box 577, Palo Alto, California, 94302.

Bremner-Davis Phonics, Inc., 161 Green Bay Road, Wilmette, Illinois, 60091.

Central Scientific Co. (Cenco), 1700 Irving Park Road, Chicago, Illinois, 60613.

Continental Press, Inc., 1451 Dundee Avenue, Elgin, Illinois, 60120.

Didactics Corporation, 700 Grace Street, Mansfield, Ohio 44905.

Educational Developmental Laboratories, Inc., Division of McGraw-Hill, Inc., Huntington, New York, 11743.

Encyclopaedia Britannica Press, Inc., 425 North Michigan Avenue, Chicago, Illinois, 60611.

Follett Publishing Company, Inc., 1010 West Washington Blvd., Chicago, Illinois, 60607.

Globe Book Company, 175 Fifth Avenue, New York, New York, 10010.

Harcourt, Brace & World, Inc., 680 Forrest Road, N. E., Atlanta, Georgia, 30312.

Honor Products Company, 22 Moulton Street, Cambridge, Massachusetts, 02138.

McGraw-Hill Book Company, Inc., 350 West Forty-Second Street, New York, New York, 10016.

Science Research Associates, 259 East Erie Street, Chicago, Illinois, 60611.

Teaching Materials Corporation, 575 Lexington Avenue, New York, New York, 10017. (TMI or Crolier)

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on Adult Education